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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,733	02/14/2002	Ulrich Behrendt	21102 US	1652

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HOFFMANN-LA ROCHE INC.  
PATENT LAW DEPARTMENT  
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EXAMINER

MENON, KRISHNAN S

ART UNIT	PAPER NUMBER
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1723

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/075,733

Applicant(s)

BEHRENDT ET AL.

Examiner

Krishnan S. Menon

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11, 13-23, 25, 26, 42-44 and 47 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-11, 13-23, 25, 26, 42-44 and 47 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

Claims Pending: 1-11,13-23, 25, 26, 42-44 and 47.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4,7-11,13,14, 16-23, 25, 26, 42-44 and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by WO95/35153 (reference submitted by applicant in an IDS after notice of allowance).

Claim 1: WO teaches a hollow fiber membrane module (figures 1 and 7-12) comprising a housing (2 or 9 in fig 7: the housing forms an annulus between members 2 and 9 into which the modules 3 having the segmentation elements are inserted) having an inner, generally cylindrical, space (defined by member 2) and a surrounding packing space (space between 2 and 9 in figure 7), structure surrounding the packing space (fig 12) having an opening (5) for liquid to travel to the packing space (F), hollow fiber membrane bundles (S) with plurality of hollow fibers in parallel, with volumetric ratio of membranes to packing space between 3-10% (page 20, lines 19-25), and segmentation elements with openings as claimed (fig 10-12; page 43 lines 3-14. Segmentation elements are fitted on a surface of the housing – elements are fitted on to the surface 9 and 2. Segmentation elements are also generally radial – each segmentation element

Art Unit: 1723

forms an arc with a thickness in the radial direction – see figure 12. Figure 10 shows a segmentation element with plurality of openings on the surface marked “S”, in addition to the inlet and outlet 4 and 5. The segmentation elements separate the hollow fiber bundles from one-another). The preamble of filtration, dialysis, etc are intended use. A claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). With regard to the claim language “an inner generally cylindrical space defined by a first outer dimension a surrounding packing space extending around said inner space and defined between said first outer dimension and second outer dimension greater than said first outer dimension”: this language does not define any structure to the claimed module. Space and dimensions do not add to structure. Only an outer structure surrounding the packing space is defined which has the second outer dimension, and this would be part 9 of figure 7 in the reference. An open area for the outer structure (9) is provided by (12).

Claim 2: cylindrical – fig 8

Claims 3, 4: hollow fiber membrane module with outer structure of the housing includes lateral openings – se fig 7 and 9. Shapes are at least circular

Claim 7: material is polymer – abstract

Claims 8,9: hollow fiber dimensions – page 13.

Art Unit: 1723

Claims 10,11: bundles of fibers (fig 10); potted – page 12 line 20. Mat form: fig 6.

Claim 13: segmentation element has a frame part with opening and free passage surface surrounded by frame – figures 9-12. Surface has holes for the fluids to pass, in addition to port 5.

Claim 14: stabilization elements – the segments have structure on all 6 sides.

Claim 16: segmentation element fitted to the inner surface of housing (see fig 7 and 8); compartmentalized – fig 9.

Claim 17, 18: segmentation element fitted to the outer surface of the housing: see fig 7-10. The 'housing' can be the inside surface (3) of the module also, in line with applicants' definition as in fig 4 of applicant's specification. Second cage like housing – see figures.

Claim 19: length of one segmentation element = length of housing – see fig 9

Claim 20: at least one segmentation element is shorter – see fig 7.

Claim 21: segmented potting –fig 10

Claim 22, 23: one compartment from two segments; fixed on at least one segment – fig 10

Claim 25: Housing connections – fig 7, 9

Claim 26: Materials capable of being sterilized at 121 C: materials withstand high temperature – abstract.

Claim 42: inside diameters – page 17

Art Unit: 1723

Claim 43: less than 10 fibers/cm – inherent by the packing density defined in claim 1.

Claim 44: one compartment by two segmentation elements – fig 10

Claim 47: hollow tubular membranes have same or different diameters – page 17.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5,6 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO95/35153.

Claims 5,6, 15: Opening sizes and area ratios are optimizable depending on the flow rates required and the pressure drops allowable. Discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art. In re Boesch and Slaney, 205 USPQ 215 (CCPA 1980); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955)

### ***Response to Arguments***

Art Unit: 1723

Applicant's arguments filed 8/1/05 have been fully considered but they are not persuasive.

In response to the argument that Iversen does not teach all the elements of the claim, please refer to the rejection. The rejection has been made clearer by separately identifying each element of the claim. Openings of the segmentation elements are the perforations on the surfaces of "S" in addition to the ports 4 and 5. The segmentation elements (S) are fitted to the surface of the housing (9)

Re the arguments against the 103 rejection: the segmentation elements (S) are clearly identified in the rejection; they extend radially from the surface (9) and have perforations on them through which liquid can travel. If applicant considers the segmentation element as just a partition wall, please note that the claim language is not so limited and reads on the 3-dimensional segments (S) of the reference.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 1723

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S. Menon whose telephone number is 571-272-1143. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Krishnan S. Menon  
Patent Examiner  
8/29/05

  
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